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09/847,308	05/03/2001	Yasuyuki Arai	740756-2312	5435

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EXAMINER	
TUROCY, DAVID P	
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1792	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/14/2008 have been fully considered but they are not persuasive.

The applicant has argued against the Burrows reference, stating the examiner made mere conclusory statements, however, the examiner disagrees. Burrows clearly discloses organic material is known and suitable in the art to be evaporated at atmospheric pressure using resistive heating (page 93).

The applicant has argued against the Burrows references, stating the reference is not related to method manufacturing a light emitting layer comprising organic electroluminescence material and is therefore not related to the process of the applicant. The examiner disagrees. Burrows is directed to vapor phase deposition of an organic material, similar to that as encompassed by the applicants process.

The applicant has argued against the Ardaillon reference, stating the reference is not related to method manufacturing a light emitting layer comprising organic electroluminescence material and is therefore not related to the process of the applicant. Ardaillon is provided as a teaching that in evaporation of organic material is dependant on the temperature and pressure and one of ordinary skill in the art would recognize the adjustment of temperature and pressure in the evaporation of organic material to lead to predictable results.

The applicant argues against the Wadley reference, stating the reference is directed to e-beam evaporation using a water-cooled crucible; however, the examiner

disagrees that the teachings of Wadley are limited to the narrow interpretation. Wadley clearly discloses that evaporation via resistive heating is operable for materials that have a low melting point (column 7, lines 24-35).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Specifically, Burrows discloses organic material is known and suitable in the art to be evaporated at atmospheric pressure using resistive heating (page 93) and Ardaillon '238 discloses that the evaporation of organic material is directly related to the pressure and the temperature within the chamber and one skilled in the art is capable of adapting the operating conditions, i.e. the temperature and pressure, to obtain the best evaporation of the organic material. (Column 3 lines 45-55). Ardaillon '238 also discloses evaporation pressure is directly related to temperature, wherein to evaporate at an increased in pressure the temperature must be increased. (Column 3 lines 45-55). Additionally, Wadley '314 teaches an evaporation method in which a crucible (i.e., an evaporation cell) is filled with an evaporation source and directed to the deposition substrate in the presence of an argon at up to atmospheric pressure (col. 5, lines 50-64; col. 11, lines 8-12). While Wadley is directed to e-beam evaporation using a water-cooled crucible, Wadley clearly discloses that evaporation via resistive heating is operable for materials that have a low melting point (column 7, lines 24-35). Therefore Wadley suggests to one of ordinary skill in the art that using resistive heating to

evaporate low melting point materials to provide rapid evaporation. Also Wadley suggests evaporating using a gas to direct to the evaporant onto the substrate provides the advantage of not having to use high vacuum, which requires expensive equipment and allows for inefficient material utilization and only line of sight deposition (column 1, lines 55-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have heated the crucible at atmospheric pressure as suggested by Burrows with a reasonable expectation of successfully providing a film because Burrows discloses atmospheric pressure is known and suitable in the art to evaporate organic material and Ardaillon '238 discloses adjusting the temperature and pressure in the chamber will provide efficient evaporation of organic materials such as increasing the pressure. Additionally one would be motivated to use atmospheric pressure to reap the benefits of higher efficiency, lower cost, and lower vacuum requirements as suggested by Wadley '314.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID TUROCY whose telephone number is (571)272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David Turocy/
Examiner, Art Unit 1792

/Timothy H Meeks/
Supervisory Patent Examiner, Art Unit 1792